REMARKS

The following remarks are being submitted as a full and complete response to the Office Action dated April 29, 2008. In view of the amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to all outstanding rejections and/or objections, that they be withdrawn, and to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 1 and 3-16 are under consideration in this application. Claims 1, 3, 10 and 13-14 are being amended, as set forth in the above marked-up presentation of the claim amendments, in order to more particularly define and distinctly claim applicant's invention. New claims 15-16 are being added. All the amendments to the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Prior Art Rejections

Claims 1 and 3-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Collura (US 5,899,867) in view of deCharms (US 2002/0103429). This rejection has been carefully considered, but is most respectfully traversed.

The training assistant system of the present invention (for example, the Embodiment 2 depicted in Figs. 1 & 8; pp. 22-26), as now recited in claim 1, comprises: a training task presentation unit 120 for presenting a <u>search</u> task (open & close palm in Fig. 9) <u>for searching a region of interest ROI of a brain (e.g., a working memory in the frontal cortex, p. 13, line 4)</u> (Step 802 in Fig. 8) a plurality of times to a trainee having damage in the brain (Step 809) <u>thereby presenting a training task (e.g., calculation in Fig. 5; Step 503 in Fig. 8) thereafter</u>; a trainee's response collection unit 111 for collecting, from the trainee, a response in accordance with the <u>search</u> task (Steps 804-805); a brain activity measurement unit 101 for measuring brain activity at a plurality of brain regions of the trainee (Step 806); and an information processor 108 including: means for selecting the region of interest among the plurality of brain regions (Step 808 in Fig. 8 identifying an active region in synchronism with the trainee's movement as ROI; p. 25, lines 2-13; claim 10) by comparing a response from the trainee's response collection unit 111 with measurement results 103 (Fig. 3) from the brain activity measurement unit 101 <u>and by obtaining a correlation between the response and</u>

measurement result (Step 807), **the region of interest being a compensatory region in the brain which functions in place of a damaged location in the brain and is activated in response to the search task**("*If the trainee has an impairment in the brain and the impaired region exhibits no activity, a compensatory region in the brain which is activated in response to the task should be searched*" p. 23, line 12; "*If a compensatory region which functions in place of the damaged region in the brain is searched as in the case where the trainee is a patient having a damage in the brain*" p. 28, lines 6-9); means for controlling presentation by said training task presentation unit 120; and means for determining said training task to be performed, **which is previously associated with the selected region of interest** (Step 810; "*the training is initiated by regarding the region as ROI*" p. 26, lines 2-3).

As recited in claim 10, said means for selecting compares a first timing of the response obtained from the trainee and a plurality of second timings of the brain activity in the regions of the brain, and selects the region of interest by judging synchronism between the first timing and the second timings (Step 807 in Fig. 8; p. 25, lines 1-6). As recited in claim 11, the synchronism between the first timing and the second timings is judged by using a correlation coefficient or a calculation method (p. 24, lines 10-13).

As recited in claim 13, the training task presentation unit 120 presents a new training task to the trainee (training after the ROI followings the same procedure of Fig. 4 (right side of Fig. 8), p. 26, lines 7-10). A response to said new training task from the trainee's response collection unit is compared with measurement results of said new training task from the brain activity measurement unit to evaluate a result of training so as to decide another new training task to be performed (cancelled claim 2; "*set at least one region of interest (ROI) at which brain activity measurement is performed*" p. 11, last paragraph; Step 511 in Figs. 4 & 8; p. 15, lines 9-16).

As recited in claim 15, the training task presentation unit 120 presents a plurality of search tasks (p. 25, line 17). As recited in claim 16, the brain activity measurement unit measures brain activity at the plurality of brain regions of the trainee prior to (Step 801; p. 23, lines 16-17) as well as after (Step 805) a time point when the search task is presented.

For example, if the trainee has an impairment in the brain and has left hand fingers paralyzed, that a search task for searching the ROI is a physical movement task. If the trainee has an impairment in the brain and the impaired region exhibits no activity, a compensatory region in the brain which is activated in response to the task should be searched. If the trainee cannot move the left hand at all regardless of his or her intensive effort, not only an instruction in a sentence but also, e.g., an image of a left hand is presented on the training task

presentation 110 so that the trainee can imagine the task. The invention thus determines a region of interest (ROI) for a trainee who is a patient with damage in the brain when the ROI cannot be specified in advance, and then proceeds to training.

Applicants respectfully contend that the cited references fail to teach or suggest such "means for selecting the region of interest among the plurality of brain regions by comparing a response from the trainee's response collection unit with measurement results from the brain activity measurement unit and by obtaining a correlation between the response and measurement result, the region of interest being a compensatory region in the brain which functions in place of a damaged location in the brain and is activated in response to the search task" as in the present invention.

In contrast, Collura only records self-administered monitoring, displaying, analyzing and recording electrical activity of the brain to provide indications of brain activity and a corresponding mental state of a user (Abstract). As admitted by the Examiner (p. 3, 2nd paragraph of the outstanding Office action), Collura does not concern any "damage/injury in the brain", or selecting "a region of interest being a compensatory (non-damaged) region in the brain which functions in place of a damaged location in the brain and is activated in response to the training task", etc,, as does the present invention.

deCharms needs to know a location of the injury/damage in order to locate ROI ([0665]) or a condition to be treated in order to locate ROIs ([0070]-[0071]), and then its measurement unit decides a second training task to be performed based upon a first training task ([0392]). Neither Collura nor deCharms teaches or suggests using any compensatory region in the brain of a trainee having damage in the brain as recited in claim 1.

Applicants respectfully contend that none of the cited references or their combinations teaches or suggests the features recited in the independent claim 1 or its dependent claims. As such, the present invention as now claimed is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.
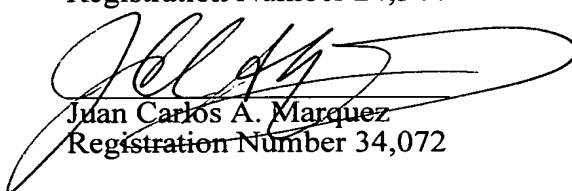
Conclusion

In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor

rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and telephone number indicated below.

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